Listing of Claims

Claim 1 (twice amended): A method of treating hemophilia in a mammal, comprising:

providing at least one recombinant adeno-associated virus (rAAV) virion, said rAAV virion comprising an AAV-6 capsid, and a heterologous nucleic acid encoding Factor IX operably linked to expression control elements; and

administering said ~~rAV~~ rAAV virion to at least one muscle cell of a mammal wherein said Factor IX is expressed at levels having a therapeutic effect on said mammal, wherein said therapeutic effect is an increase in blood-clotting efficiency in said mammal.

Claim 2 (original): The method of claim 1, wherein said Factor IX is human Factor IX.

Claim 3 (original): A method of delivering a heterologous nucleic acid to at least one muscle cell in a mammalian subject, comprising

(a) providing at least one recombinant adeno-associated virus (rAAV) virion, said rAAV virion comprising an AAV-6 capsid and a heterologous nucleic acid operably linked to expression control elements; and

(b) administering said rAAV virions to said muscle cell, whereby expression of said heterologous nucleic acid provides for a therapeutic effect.

Claim 4 (twice amended): The method of claim 3, wherein said heterologous nucleic acid is ~~an anti-sense RNA~~ a gene encoding a protein.

Claim 5 (withdrawn): The method of claim 3, wherein said heterologous nucleic acid is an anti-sense RNA.

Claim 6 (withdrawn): The method of Claim 3, wherein said heterologous nucleic acid is a ribozyme.

Claim 7 (original): The method of claim 4, wherein said protein is a secreted protein.

Claim 8 (original): The method of claim 7, wherein said secreted protein is a blood coagulation factor.

Claim 9 (original): The method of claim 8, wherein said blood coagulation factor is human factor IX.

Claim 10 (original): The method of claim 3, wherein said administering of said rAAV virions is by way of direct injection to said muscle cell of said mammalian subject.

Claim 11 (original): The method of claim 10, wherein said muscle cell is a skeletal muscle cell.

Claim 12 (original): The method of claim 3, wherein said administering of said rAAV virions is by way of administration to a vascular conduit of said mammalian subject.

Claim 13 (original): The method of claim 13, wherein said vascular conduit is a vein.

Claim 14 (original): The method of claim 13, wherein said vascular conduit is an artery.

Claim 15 (original): The method of claim 3, wherein said therapeutic effect is an increase in blood-clotting efficiency in said mammalian subject.

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Respectfully submitted,

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